IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 19 and 21-23, in accordance with the following:

1. (ORIGINAL) An apparatus for driving a multi-pole, brushless motor having a plurality of multi-phase stator coils, the driving apparatus comprising:

an inverter switching driving voltages applied to the multi-phase stator coils;

a driver driving the inverter;

a counter-electromotive voltage detector detecting a counter-electromotive voltage induced from an unexcited stator coil; and

a controller determining an elapsed time required to detect a counter-electromotive voltage through the counter-electromotive voltage detector after the driving voltage is turned off, to determine a phase commutation point of time based on the determined elapsed time, and controlling the driver to perform phase commutation at the determined phase commutation point of time.

2. (ORIGINAL) The apparatus according to claim 1, wherein the controller determines a reference point of time based on the counter-electromotive voltage, and determines a point of time, which is earlier than the determined reference point of time by a preset time corresponding to the determined elapsed time, as the phase commutation point of time.

3. (ORIGINAL) The apparatus according to claim 2, wherein the preset time is proportional to the determined elapsed time.

4. (ORIGINAL) The apparatus according to claim 2, wherein the reference point of time is a point of time when a predetermined delay time has elapsed after the counter-electromotive voltage has reached a preset zero-crossing point.

5. (ORIGINAL) The apparatus according to claim 4, wherein the zero-crossing point corresponds to an average voltage between a highest voltage and a lowest voltage of

points at which the phases intersect each other.

6. (ORIGINAL) The apparatus according to claim 1, wherein a difference between a first and a second phase of the plurality of the multi-phase stator coils is substantially 120°.

7. (ORIGINAL) A method of controlling a multi-pole, brushless motor equipped with a plurality of multi-phase stator coils, the method comprising:

determining an elapsed time from a falling edge of a driving voltage to a rising edge of a counter-electromotive voltage in an unexcited state of the brushless motor;

determining a phase commutation point of time depending on the determined elapsed time; and

performing phase commutation at the determined phase commutation point of time.

8. (ORIGINAL) The method according to claim 7, further comprising:

determining a reference time based on the counter-electromotive voltage; and

determining a time earlier than the determined reference time by a preset time corresponding to the determined elapsed time as the phase commutation time.

9. (ORIGINAL) The method according to claim 8, wherein the preset time is proportional to the determined elapsed time.

10. (ORIGINAL) A method of controlling a brushless motor performing phase commutation at a reference time determined based on a counter-electromotive voltage induced from an unexcited stator coil, the method comprising:

determining an elapsed time from a falling edge of an unexcited driving voltage to a rising edge of the counter-electromotive voltage;

determining whether the counter-electromotive voltage reaches a preset point; and

determining a time earlier than the reference point of time by a reduced amount of a delay time corresponding to the determined elapsed time, upon the counter-electromotive voltage reaching the preset point, as a phase commutation point of time.

11. (ORIGINAL) The method according to claim 10, wherein the reduced amount of the delay time is proportional to the determined elapsed time.

12. (ORIGINAL) The method according to claim 10, wherein the preset point is a preset zero-crossing point.

13. (ORIGINAL) A method of controlling a brushless motor equipped with a plurality of multi-phase stator coils, the method comprising:

determining an elapsed time from a first edge of a first voltage to a second edge of a second voltage for an unexcited state of the brushless motor;

determining a time for phase commutation depending on the determined elapsed time; and

performing phase commutation at the phase commutation point of time.

14. (ORIGINAL) The method according to claim 13, further comprising:

determining a reference point of time based on the first voltage or the second voltage; and

determining a time earlier than the determined reference point of time by a preset time corresponding to the determined elapsed time as the phase commutation point of time.

15. (ORIGINAL) The method according to claim 14, wherein the preset time is proportional to the determined elapsed time.

16. (ORIGINAL) A method of controlling a brushless motor performing phase commutation at a reference time determined based on a first voltage induced from an unexcited stator coil, the method comprising:

determining an elapsed time from a first edge of an unexcited second voltage to a rising edge of the first voltage;

determining whether the first voltage reaches a preset point; and

determining a time earlier than the reference point of time by a reduced amount of a delay time corresponding to the determined elapsed time, upon the first voltage reaching the preset point, as a phase commutation point of time.

17. (ORIGINAL) The method according to claim 16, wherein the reduced amount of the delay time is proportional to the determined elapsed time.

18. (ORIGINAL) The method according to claim 17, wherein the preset point is a

preset zero-crossing point.

19. (CURRENTLY AMENDED) A method of controlling a brushless motor, comprising:

detecting a falling edge of a terminal voltage in an unexcited state in which a driving voltage is turned off;

upon detection of a rising edge of a counter-electromotive voltage, determining the elapsed time after the detecting the falling edge of the terminal voltage; and

performing phase commutation at a point of time depending on the determined elapsed time.

20. (ORIGINAL) The method of controlling a brushless motor according to claim 19, wherein the performing phase commutation comprises:

comparing the determined elapsed time with a predetermined minimum detection time and a predetermined maximum detection time.

21. (CURRENTLY AMENDED) The method of controlling a brushless motor according to claim 20, wherein the performing phase commutation further comprises:

upon determining that the compared determined elapsed time is less than the minimum detection time, setting ~~a~~ the point of time for phase commutation as the time corresponding to a electrical angle of 30° elapsing after a zero-crossing point is detected,

detecting a zero-crossing point,

determining that the time corresponding to the electrical angle of 30° has elapsed,

outputting a phase commutation signal, and

applying a driving voltage to a next phase.

22. (CURRENTLY AMENDED) The method of controlling a brushless motor according to claim 20, wherein the performing phase commutation further comprises:

upon determining that the determined elapsed time is equal to or greater than a minimum detection time and is less than a maximum detection time, determining a delay time proportional to the determined elapsed time,

setting ~~a~~ the point of time for phase commutation as the time corresponding to an electrical angle of 30°- the determined delay time elapsing after a zero-crossing point is

detected,

outputting a phase commutation signal, and

applying a driving voltage to a next phase.

23. (CURRENTLY AMENDED) The method of controlling a brushless motor according to claim 20, wherein the performing phase commutation further comprises:

upon determining that the determined elapsed time is greater than, or equal to, a maximum detection time, setting ~~a~~ the point of time for phase commutation as the time corresponding to an electrical angle of 30° - a maximum delay time elapsing after a zero crossing point is detected,

outputting a phase commutation signal, and

applying a driving voltage to a next phase.

24. (ORIGINAL) An apparatus for driving a brushless motor having multi-phase stator coils, comprising:

an inverter switching at least one voltage applied to the multi-phase stator coils;

a driver driving the inverter; and

a controller determining an elapsed time required to detect a first voltage after a second voltage is turned off, to determine a phase commutation point of time based on the determined elapsed time, and controlling the driver to perform phase commutation at the determined phase commutation point of time.

25. (ORIGINAL) The apparatus according to claim 24, wherein the controller determines a reference point of time based on the first voltage or the second voltage, and determines a point of time, which is earlier than the determined reference time by a preset time corresponding to the time, as the phase commutation time.

26. (ORIGINAL) The apparatus according to claim 25, wherein the preset time is proportional to the determined elapsed time.

27. (ORIGINAL) The apparatus according to claim 25, wherein the reference point of time is a point of time when a predetermined delay time has elapsed after the first voltage or the second voltage has reached a preset crossing point.

28. (ORIGINAL) The apparatus according to claim 27, wherein the crossing point corresponds to an average voltage between a highest voltage and a lowest voltage of points at which the phases intersect each other.